TROW CREEK WATER ASSOCIATION (PWSNO 1110029)
SOURCE WATER ASSESSMENT REPORT

February 27, 2003

State of Idaho
Department of Environmental Quality

Executive Summary

Under the Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the act. This risk assessment is based on a land use inventory in the well recharge zone, sensitivity factors associated with how the well was constructed, and aquifer characteristics.

This report, *Source Water Assessment for Trow Creek Water Association*, describes the public drinking water sources; the recharge zones and potential contaminant sites located inside the recharge zone boundaries. This assessment, taken into account with local knowledge and concerns, should be used as a planning tool to develop and implement appropriate protection measures for this public water system. **The results should <u>not be</u> used as an absolute measure of risk and they should <u>not be</u> used to undermine public confidence in the water system.**

The Trow Creek Water Association operates a community water system serving 46 rural homes, two customs stations and two taverns in the vicinity of Porthill, Idaho (Figure 1). Springs at the base of Hall Mountain that were developed in the 1940s are the primary source of drinking water. The association also owns a back up well east of Porthill

The springs are subject to surface water influence and are susceptible to naturally occurring microbial contamination. Susceptibility to other classes of regulated contaminants is low because the watershed above the intake is undeveloped forest. The well ranked moderately susceptible to contamination in an analysis DEQ conducted January 23, 2003. Risk factors related to local geology added the most points to the final susceptibility scores.

This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a "pristine" area or an area with numerous industrial and/or agricultural land uses that require education and surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

For Trow Creek Water Association, drinking water protection for the springs means protecting the watershed, especially from road building, logging or recreational activities that increase turbidity of the water. For the well, protection efforts should focus on preventing ground water contamination from agricultural land use.

SOURCE WATER ASSESSMENT, Trow Creek Water Association

Section 1. Introduction - Basis for Assessment

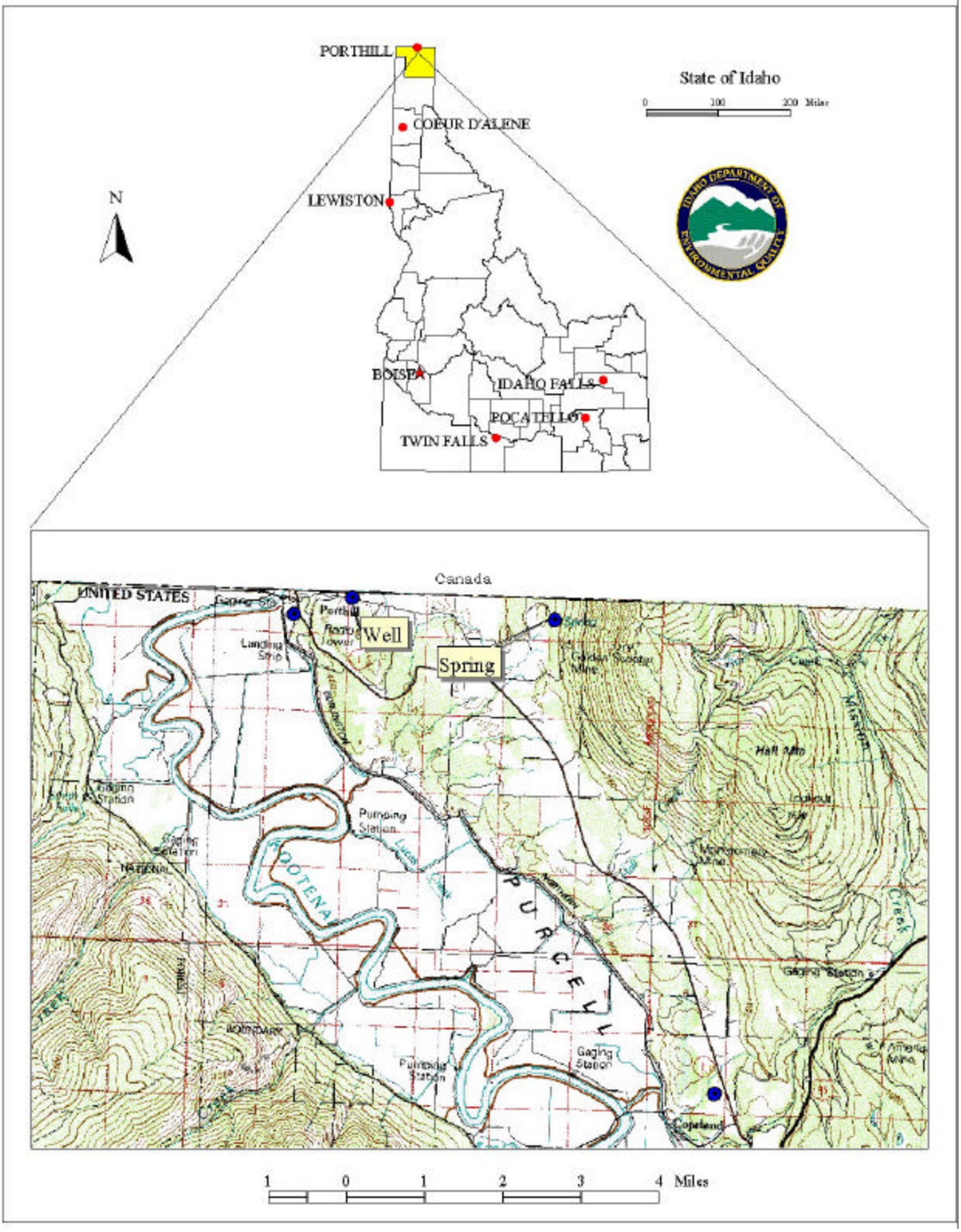
The following sections contain information necessary for understanding how and why this assessment was conducted. **It is important to review this information to understand what the ranking of this source means.** Maps showing the delineated source water assessment area and an inventory of significant potential sources of contamination identified within that area are included. The water Susceptibility Analysis Worksheets used to develop this assessment is attached.

Level of Accuracy and Purpose of the Assessment

The Idaho Department of Environmental Quality (DEQ) is required by the U.S. Environmental Protection Agency (EPA) to assess every public drinking water source in Idaho for its relative susceptibility to contaminants regulated by the Safe Drinking Water Act. These assessments are based on a land use inventory inside the delineated recharge zones, sensitivity factors associated with how the well is constructed, and aquifer characteristics. The state must complete more than 2900 assessments by May of 2003. Because resources and the time available to accomplish assessments are limited, an in-depth, site-specific investigation for every public water system is not possible.

The results of the source water assessment should not be used as an absolute measure of risk and they should not be used to undermine public confidence in the water system. The ultimate goal of this assessment is to provide data to local communities for developing a protection strategy for their drinking water supply. The Idaho Department of Environmental Quality recognizes that pollution prevention activities generally require less time and money to implement than treating a public water supply system once it has been contaminated. DEQ encourages communities to balance resource protection with economic growth and development. The decision as to the amount and types of information necessary to develop a source water protection program should be determined by the local community based on its own needs and limitations. Wellhead or source water protection is one facet of a comprehensive growth plan, and it can complement ongoing local planning efforts.

Figure 1. Geographic Location of Trow Creek Water Association



Section 2. Preparing for the Assessment

Defining the Zones of Contribution - Delineation

The delineation process establishes the physical area around a water source that will become the focal point of the assessment and protection efforts. For wells, the process includes mapping the boundaries of the well recharge area into time of travel (TOT) zones indicating the number of years necessary for a particle of water flowing through the aquifer to reach a well. To protect surface water systems from potential contaminants, the EPA required that the entire drainage basin be delineated upstream from the intake to the hydrologic boundary of the drainage basin (U.S. EPA, 1997b).

The Trow Creek Water Association spring delineation was drawn on a 7.5 minute U.S. Geological Survey Map by tracing the ridge lines that define the basin above the spring structure. The delineation encloses about 270 acres (Figure 2).

Because little site specific data is available for the Trow Creek Water Association well a calculated fixed radius method was used to delineate 0-3, 3-6 and 6-10 year time of travel (TOT) boundaries for this source. The calculated fixed radius method uses existing generalized hydrogeologic data for the major aquifer types in Idaho and pumping volume estimates. The well log for this source indicates a 500-foot deep well completed in basalt with a static water level 150 feet below ground surface. The pumping volume (3850 ft^3/day) was estimated from a population served of 120 and a multiplier of 1.5. Based on the well log the saturated thickness was assumed to be 135 feet. The gradient of 0.013 was estimated based on changes in static water level between a well located northeast of the source and the source itself. Hydraulic conductivity estimated from the pumping test of the source well was 1 foot per day.

Based on these assumptions and available information fixed radius time of travel zones, with eccentric circles oriented with the estimated direction of ground water flow, were generated. The radii of the 3, 6 and 10-year TOT circles were estimated to be 326, 471, and 601 feet, respectively. These circles are also offset in the upgradient direction to take into account the small degree of ambient flow of the ground water system. The resulting delineation shown in Figure 3 is generally oriented in an east to west direction with the assumption being the ground water system is moving toward the Kootenai River as a discharge location.

Identifying Potential Sources of Contamination

The goal of the inventory process is to locate and describe those facilities, land uses, and environmental conditions that are potential sources of water contamination. Inventories for all public water systems in Idaho were conducted in two-phases. The first phase involved identifying and documenting potential contaminant sources within a system's source water assessment area through the use of computer databases and Geographic Information System maps developed by DEQ. Maps showing the delineations and tables summarizing the results of the database search were then sent to system operators for review and correction during the second or enhanced phase of the inventory process.

Many potential sources of contamination are regulated at the federal level, state level, or both to reduce the risk of release. When a business, facility, or property is identified as a potential contaminant source, this should not be interpreted to mean that this business, facility, or property is in violation of any local, state, or federal environmental law or regulation. What it does mean is that the potential for contamination exists due to the nature of the business, industry, or operation.

Section 3. Susceptibility Analysis

The susceptibility to contamination of all water sources in Idaho is being assessed on the following factors:

- physical integrity of the well or surface water intake,
- hydrologic characteristics of ground water sources,
- land use characteristics, and potentially significant contaminant sources
- historic water quality

The susceptibility rankings are specific to a particular potential contaminant or category of contaminants. A high susceptibility rating relative to one potential contaminant does not mean that the water system is at the same risk for all other potential contaminants. The relative ranking that is derived for each well is a qualitative, screening-level step that, in many cases, uses generalized assumptions and best professional judgement. The following summaries describe the rationale for the susceptibility ranking. The susceptibility analysis worksheets for the Trow Creek Water Association springs and well in Attachment A show in detail how the sources were scored.

System Construction

Springs. The construction of surface water intakes affects their ability to remove debris and to provide some filtration prior to treatment. Sanitary surveys provided information for this portion of the susceptibility analysis.

Three springs developed in the 1940s by the federal government are the primary drinking water source for The Trow Creek Water Association. The springs surface at the base of the mountains on the Canadian border east of Porthill. Water collected at the surface by 3-inch black plastic pipe flows into a concrete spring box, then is piped about 900 feet to a slow sand filter constructed in 1989. The spring water is exposed to the atmosphere and is subject to surface water contamination before it is collected.

Well. Construction factors directly affect the ability of a well to protect the aquifer from contaminants. Lower scores imply a well that can better protect the water. This portion of the susceptibility analysis relies on information from individual well logs and from the most recent sanitary survey of the public water system. When the Trow Creek Water Association well was inspected in 1994 it appeared to be properly sealed and vented.

The well was drilled in 1986 to a depth of 500 feet. It is sealed to a depth of 30 feet with bentonite, cased with 8-inch diameter 0.25 gauge steel to 68 feet, and lined to 495 feet with PVC. Current Idaho Department of Water Resources well construction standards require the surface seal to extend into the rock formation above the water-bearing zone. The standards also specify a minimum wall thickness of 0.322 inches for 8-inch steel casing. The steel casing terminates at the interface between unconsolidated granular material and the underlying basalt. The liner is perforated between 200 and 250 feet below ground surface and between 440 and 495 feet.

Hydrologic Sensitivity

The susceptibility analyses for ground water sources includes assignment of hydrologic sensitivity scores that reflect natural geologic conditions at the well site and in the recharge zone. Information for this part of the analysis is derived from individual well logs and from the soil drainage classification inside the delineation boundaries. The Trow Creek Water Association well scored 5 points out of 6 points possible in this portion of the susceptibility analysis.

Soils in the recharge zone as a whole are classified as moderately well to well drained. Soils that drain rapidly are deemed less protective of ground water than slow draining soils. The well log shows first water 250 feet below ground in a basalt stratum producing 10 to 25 gallons per minute. The most productive level, up to 80 gallons per minute, is in broken basalt from 470 to 500 feet below the surface. Clay and sand from the surface to 68 feet below is mixed with basalt chips and does not constitute an aquitard.

Potential Contaminant Sources and Land Use.

Springs. Undeveloped forest and talus slopes characterize the spring watershed. The U.S. Geological Survey map of the area shows a jeep trail terminating near an abandoned mine site on the hillside about 1000 feet south of the springs. Roads in the watershed are a potential source of sediment that can reduce the efficiency of the treatment process. Naturally occurring mineralization may be a non-point source of inorganic chemical contaminants. Based on the Trow Creek springs water sampling history and information from the Interior Columbia Basin Ecosystem Management Project (ICBEMP) *Mining Related Hazard Potential* database, historic thorium mining activity in the watershed is not a significant threat.

Well. The 26 acres enclosed by the Trow Creek well delineation are mostly agricultural with a small, forested area south east of the well. A county road crosses the delineation north of the well. A cemetery across the road from the well site is partially inside the 0-3 year time of travel zone. No other potential sources of contamination are documented inside the delineation boundaries.

Figure 2. Trow Creek Water Association Spring Delineation and Potential Contaminant Inventory.

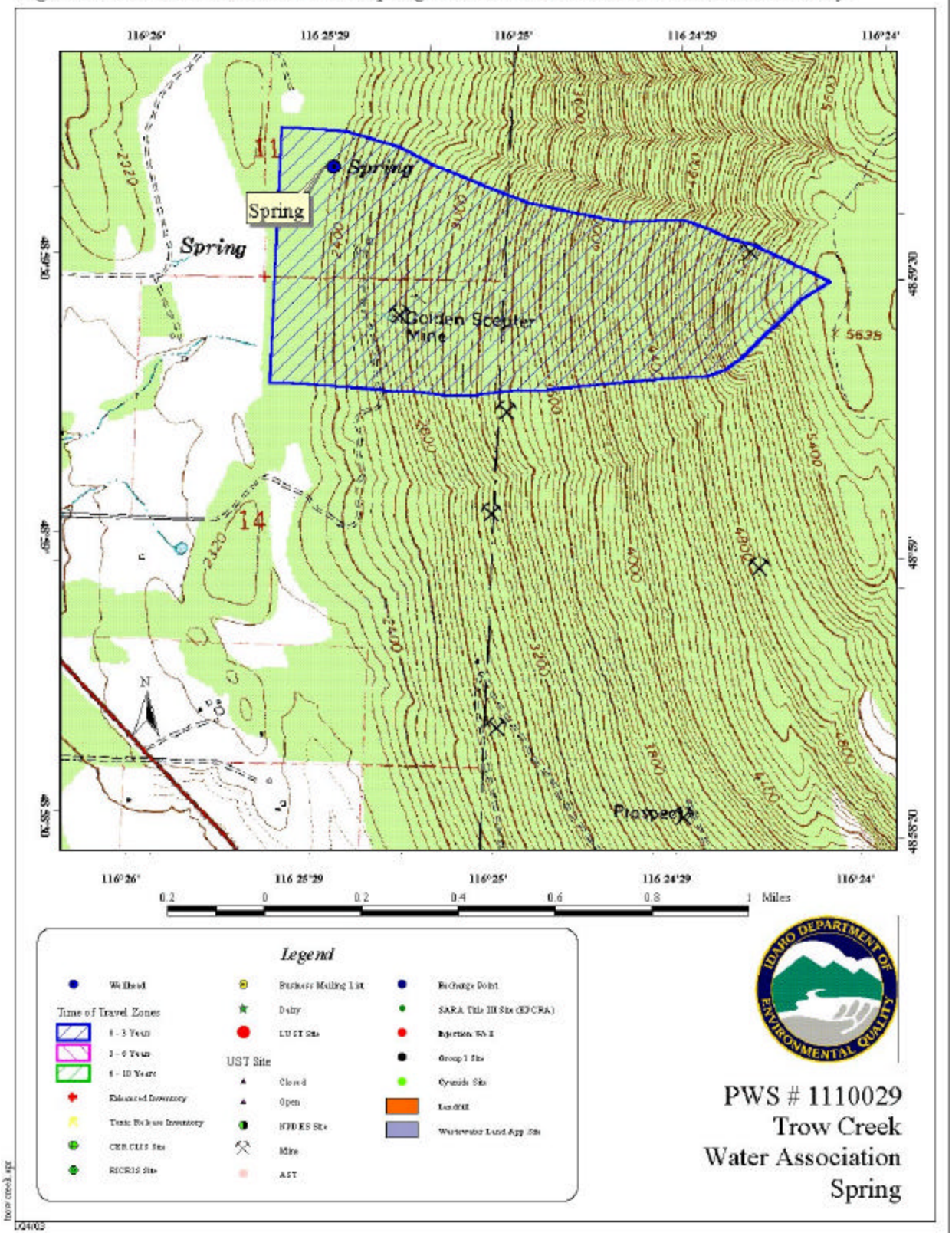
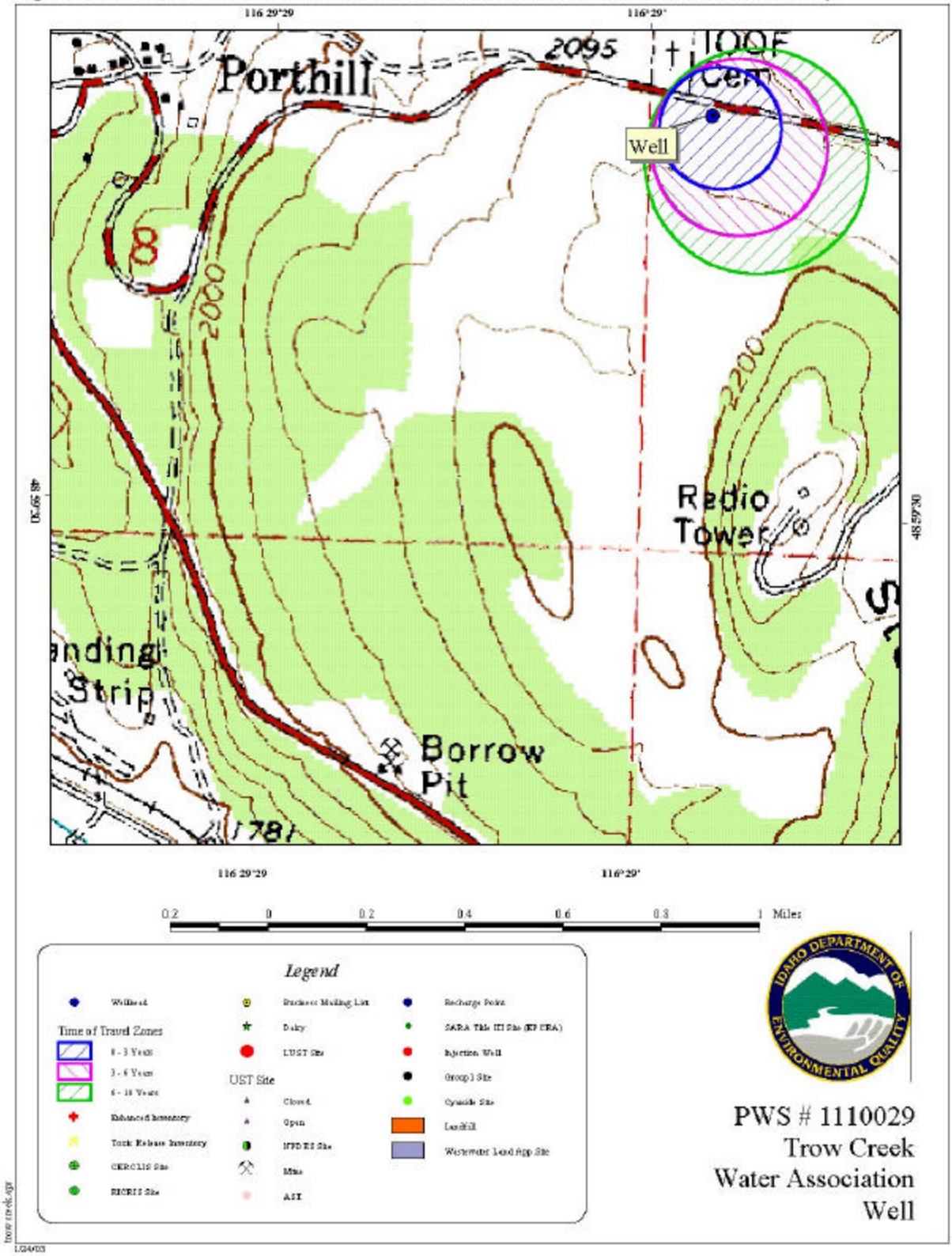


Figure 3. Trow Creek Water Association Well Delineation and Potential Contaminant Inventory.



Historic Water Quality

Trow Creek Water Association has had few water quality problems, other than natural microbial contamination. Slow sand filtration and chlorination purify the spring water before it enters the distribution system. The trihalomethanes detected in the water in April 2000 and September 2001 are by products of disinfection. The nitrate concentration in a sample from the well collected in November 2000 was 1.94 mg/l. Nitrate concentrations were below detection limits when the well was tested in 2001 and 2002. The Maximum Contaminant Level for nitrate is 10.0 mg/l. Chemical and radiological sampling results for the springs are summarized below.

Table 1. Trow Creek Water Association Chemical Test Results

Primary IOC Contaminants (Mandatory Tests)							
Contaminant	MCL (mg/l)	Results (mg/l)	Dates	Contaminant	MCL (mg/l)	Results (mg/l)	Dates
Antimony	0.006	ND	12/19/94 through 12/2/02	Nitrate	10	ND	10/27/80 through 12/2/02
Arsenic	0.01	ND	10/27/80 through 12/2/02	Nickel	N/A	ND	12/19/94 through 12/2/02
Barium	2.0	ND	10/27/80 through 12/2/02	Selenium	0.05	ND	10/27/80 through 12/2/02
Beryllium	0.004	ND	12/19/94 through 12/2/02	Sodium	N/A	2.2 to 2.4	3/31/86 through 12/2/02
Cadmium	0.005	ND	10/27/80 through 12/2/02	Thallium	0.002	ND	12/19/94 through 12/2/02
Chromium	0.1	ND	10/27/80 through 12/2/02	Cyanide	0.02	ND	12/19/94, 9/27/95
Mercury	0.002	ND	10/27/80 through 12/2/02	Fluoride	4.0	0.145 ND	10/27/80 7/23/81 through 12/2/02

Secondary and Other IOC Contaminants (Optional Tests)			
Contaminant	Recommended Maximum (mg/l)	Results	Dates
Sulfate		11.2 to 12.8 (mg/l)	12/19/94 to 12/18/97

Regulated and Unregulated Synthetic Organic Chemicals		
Contaminant	Results	Dates
29 Regulated and 13 Unregulated Synthetic Organic Compounds	None Detected	11/2/94, 4/18/00

Regulated and Unregulated Volatile Organic Chemicals		
Contaminant	Results	Dates
21 Regulated And 16 Unregulated Volatile Organic Compounds	None Detected except as noted below	11/2/94, 4/18/00, 9/25/01
Total Trihalomethanes (MCL = 100 µg/l)	9.39 µg/l 8.44 µg/l,	4/18/00 9/25/01

Radiological Contaminants Springs and Distribution system samples			
Contaminant	MCL	Results	Dates
Gross Alpha, Including Ra & U	15 pC/l	0.6 to 4.5 pC/l	7/12/83 through 9/25/01
Gross Beta Particle Activity	4 mrem/year	1.2 to 16.5 mrem 1.64 pC/l	7/12/83 through 12/18/97 9/25/01

Final Susceptibility Ranking

The Trow Creek Water Association springs, like all surface water sources, are highly susceptible to microbial contamination. With the watershed above the intake undeveloped, the risk of the springs becoming contaminated with other classes of regulated contaminants is low.

The well ranked moderately susceptible to all classes of regulated contaminants, mostly because of risk factors associated with well site geology. Totals for system construction and hydrologic sensitivity along with the cumulative scores for land use and potential contaminant sites are shown on Table 2. Complete susceptibility analysis worksheets for the Trow Creek water sources are in Attachment A.

For surface water sources, the final susceptibility score is the sum of the source construction score and the potential contaminant/land use score. The susceptibility ranking is low for sources with final scores from 0 to 7; moderate for sources scoring 8 to 15 points; and high when scores range from 16 to 21.

The final scores for ground water sources are determined using the following formulas:

1) VOC/SOC/IOC Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.2)
2) Microbial Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.35)

The final ranking categories are as follows:

- 0 - 5 Low Susceptibility
- 6 - 12 Moderate Susceptibility
- > 13 High Susceptibility

Table 2. Summary of Trow Creek Water Association Susceptibility Evaluation

Cumulative Susceptibility Scores						
Source Name	System Construction	Hydrologic Sensitivity	Contaminant Inventory			
			IOC	VOC	SOC	Microbial
Springs	3	NA	1	1	1	High
Backup Well	2	5	7	7	7	8
Final Susceptibility Scores/Ranking						
	IOC	VOC	SOC	Microbial		
Springs	4/Low	4/Low	4/Low	High		
Backup Well	8/Moderate	8/Moderate	8/Moderate	9/Moderate		

IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

Section 4. Options for Source Water Protection

The susceptibility assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what the susceptibility ranking a source receives, protection is always important. Whether the source is currently located in a "pristine" area or an area with numerous industrial and/or agricultural land uses that require education and surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

An effective source water protection program is tailored to the particular local source water protection area. The association owns four acres surrounding the springs and restricts activity there that could contaminant the water. With the springs as the primary source for Trow Creek Water Association, drinking water protection efforts should focus on preventing turbidity in the springs from surface water runoff or human activity in the watershed. Periodic inspections of the watershed to monitor changes due to human activity or natural processes need to be part of the protection program. In addition to turbidity sources the watershed inspector needs to look for signs of illegal dumping, or the presence of dead game animals near the springs. Due to the fairly short time associated with the movement of water in a small, steep watershed, source water protection activities should be aimed at both short-term and long-term management strategies to counter any future contamination threats. Source water protection activities should be coordinated with the U.S. Forest Service, and any private landowners in the watershed.

Trow Creek Water Association already has some important protections in place around the well. The well head is located in a locked pumphouse with a drained concrete floor. It is above the road and partially fenced. Agricultural land use, the cemetery across the road from the well, and road maintenance, especially any application of herbicides for weed control are the most significant potential sources of contamination. Fencing the well lots to keep livestock at least 50 feet from the well head should be considered. It will be important for Trow Creek to form ground water protection partnerships with landowners in the recharge zone.

A voluntary measure every system should implement is development of a water emergency response plan. There is a simple fill-in-the-blanks form available on the DEQ website to guide systems through the process.

Assistance

Public water suppliers and users may call the following IDEQ offices with questions about this assessment and to request assistance with developing and implementing a local protection plan. In addition, draft protection plans may be submitted to the IDEQ office for preliminary review and comments.

Idaho Department of Environmental Quality

Coeur d'Alene Regional IDEQ Office	(208) 769-1422
State IDEQ Office, Boise	(208) 373-0502
Website:	http://www.deq.state.id.us/

Idaho Rural Water Association

Melinda Harper, Groundwater Protection Specialist	(800) 962-3257
Website:	http://www.idahoruralwater.com

Idaho Association of Soil Conservation Districts

Water quality and soil conservation	(208) 338-5900
Website:	http://www.iascd.state.id.us/

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References Cited

Great Lakes-Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers, 1997. "Recommended Standards for Water Works."

Haitjema, Henk. 2000. Time of Travel Capture Zone Delineations for Wellhead Protection. Prepared for Drinking Water Branch, Indiana Department of Environmental Management. Environmental Science Research Center, Indiana University, Bloomington, Indiana

Idaho Department of Agriculture, 1998. Unpublished Data.

Idaho Department of Environmental Quality, 1997. Design Standards for Public Drinking Water Systems. IDAPA 58.01.08.550.01.

Idaho Department of Water Resources, 1993. Administrative Rules of the Idaho Water Resource Board: Well Construction Standards Rules. IDAPA 37.03.09.

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Attachment A

Trow Creek Water Association
Susceptibility Analysis Worksheets

Surface Water Susceptibility Report

Public Water System Name : **TROW CREEK WATER ASSN** Source: **SPRINGS**

Public Water System Number : **1110029**

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1. System Construction		**Score**
Intake structure properly constructed and located	NO	1
Infiltration gallery	NO	2
Total System Construction Score		**3**

2. Potential Contaminant Source / Land Use			**IOC Score**	**VOC Score**	**SOC Score**	**Microbial Score**
Predominant land use type (land use or cover)	UNDEVELOPED FOREST		0	0	0	0
Farm chemical use high	NO		0	0	0	
Significant contaminant sources within 500 ' of stream and 1000 feet of intake	YES	Naturally occurring microbial contaminants				*
Sources of class II or III contaminants or microbials	NO		0	0	0	0
Agricultural lands within 500 feet	NO					
			0	0	0	0
Other contaminant sources in watershed	.			0	0	0
Sources of turbidity in the watershed	YES. Forest road		1	1	1	1
Total Potential Contaminant Source / Land Use Score			**1**	**1**	**1**	**1**
3. Final Susceptibility Source Score			**4**	**4**	**4**	**4**
4. Final Source Ranking			Low	Low	Low	***High**

* High due to presence of natural microbial sources.

Ground Water Susceptibility

Public Water System Name : **TROW CREEK WATER ASSN** Source: **WELL**

Public Water System Number : **1110029** 1/23/03 3:01:21 PM

1. System Construction		SCORE
Drill Date	5/86	
Driller Log Available	YES	
Sanitary Survey (if yes, indicate date of last survey)	YES 1994	
Well meets IDWR construction standards	NO	1
Wellhead and surface seal maintained	YES	0
Casing and annular seal extend to low permeability unit	CASING YES, SEAL NO	1
Highest production 100 feet below static water level	YES	0
Well located outside the 100 year flood plain	YES	0
Total System Construction Score		**2**

2. Hydrologic Sensitivity		
Soils are poorly to moderately drained	NO	2
Vadose composed of gravel, fractured rock or unknown	NO	0
Depth to first water > 300 feet	NO	1
Aquitard present with > 50 feet cumulative thickness	NO	2
Total Hydrologic Score		**5**

3. Potential Contaminant / Land Use – ZONE 1A (Sanitary Setback)		IOC Score	VOC Score	SOC Score	Microbial Score
Land Use Zone 1A	DRYLAND AGRICULTURE	1	1	1	1
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	NO	NO	NO	NO	NO
Total Potential Contaminant Source/Land Use Score - Zone 1A		**1**	**1**	**1**	**1**
Potential Contaminant / Land Use - ZONE 1B (3 YR. TOT)					
Contaminant sources present (Number of Sources)	YES	1	1	1	1
(Score = # Sources X 2) 8 Points Maximum		2	2	2	2
Sources of Class II or III leacheable contaminants or Microbials	YES	1	1	1	
4 Points Maximum		1	1	1	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B	> 50% Non-Irrigated Agricultural Land	2	2	2	2
Total Potential Contaminant Source / Land Use Score - Zone 1B		**5**	**5**	**5**	**4**
Potential Contaminant / Land Use - ZONE II (6 YR. TOT)					
Contaminant Sources Present	NO	0	0	0	
Sources of Class II or III leacheable contaminants or Microbials	NO	0	0	0	
Land Use Zone II	25 to 50% I Agricultural Land	1	1	1	
Potential Contaminant Source / Land Use Score - Zone II		**1**	**1**	**1**	**0**
Potential Contaminant / Land Use - ZONE III (10 YR. TOT)					
Contaminant Source Present	NO	0	0	0	
Sources of Class II or III leacheable contaminants or Microbials	NO	0	0	0	
Do irrigated agricultural lands occupy > 50% of Zone	NO	0	0	0	
Total Potential Contaminant Source / Land Use Score - Zone III		**0**	**0**	**0**	**0**
Cumulative Potential Contaminant / Land Use Score		**7**	**7**	**7**	**5**
4. Final Susceptibility Source Score		**8**	**8**	**8**	**9**

POTENTIAL CONTAMINANT INVENTORY
LIST OF ACRONYMS AND DEFINITIONS

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks.

Business Mailing List – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

CERCLIS – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as ? Superfund? is designed to clean up hazardous waste sites that are on the national priority list (NPL).

Cyanide Site – DEQ permitted and known historical sites/facilities using cyanide.

Dairy – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

Deep Injection Well – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100year floodplains.

Group 1 Sites – These are sites that show elevated levels of contaminants and are not within the priority one areas.

Inorganic Priority Area – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

Landfill – Areas of open and closed municipal and non-municipal landfills.

LUST (Leaking Underground Storage Tank) – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

Mines and Quarries – Mines and quarries permitted through the Idaho Department of Lands.)

Nitrate Priority Area – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

NPDES (National Pollutant Discharge Elimination System) – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

Organic Priority Areas – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

RICRIS – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

UST (Underground Storage Tank) – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

Wastewater Land Applications Sites – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

Wellheads – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water assessment area.